

Experiment 1A (according to the present invention)

In 100 g of water, there were added to and dissolved 20 g of water-soluble hemicellulose (SOYAFIVE-SLA200 manufactured by Fuji Oil Co., Ltd., with an average molecular weight of about 200,000) and 60 g of trehalose. The resultant solution was sterilized by heating at 85-90°C for 15 minutes. After the solution was cooled to 60°C, 20 g of edible fats and oils which contained β -carotene in a concentration of 5 % was added to the solution and mixed. The resulting mixture was emulsified with TK-Homomixer (trade name of a mixer manufactured by Tokushu Kika Kogyo Co., Ltd.). With use of a Mobile Minor type spray dryer (manufactured by Niro Inc.), the resultant emulsion was spray-dried at an inlet temperature of 160°C and an outlet temperature of 80°C to give 92 g of β -carotene-containing powders (Inventive product 1A).

Experiment 1B (Comparative Example)

The operation of the above Experiment 1A was repeated except that 60 g of trehalose was replaced with 60 g of dextrin which was well known as excipient, and, thus, there was obtained 94 g of β -carotene-containing powders (Comparative product 1B).

Experiment 1C (Comparative Example)

The operation of the above Experiment 1A was repeated except that 20 g of water-soluble hemicellulose was replaced with 20 g of octenyl succinic acid-esterified starch which was well known as food emulsifier, and, thus, there was obtained 90 g of β -carotene-containing powders (Comparative product 1C).

[Storage Stability Test]

β -Carotene-containing powders which had been obtained in the